

Progress Report for the Stream Work Plan

February 1, 2000

I. Introduction

This report outlines the progress made to date for the Stream Work Plan. This work plan, which can be reviewed in its entirety on a separate page on this web site, is being carried out by EPA, Corps of Engineers, WVDEP, and USGS personnel.

The purpose of this effort is to supplement existing data on stream water quality and biology at and downstream of MTR/VF operations. This study will use measures of benthic populations, flow rate, field chemistry parameters, and laboratory analyses of selected parameters to characterize stream water quality and biology at these sites. This study compliments the fishery study underway for this same region as part of the PEIS.

For further information, you may wish to contact William Hoffman at 215/814-2995.

II. Progress to Date

A. Benthic Monitoring

Field and Laboratory

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|-------------------|--|
| March/April 1999: | Reconned 127 potential sampling sites. Completed Spring 1999 sampling: sampled 37 sites for benthics and limited field chemistry parameters. |
| July/August 1999: | Completed Summer 1999 sampling: sampled 28 sites for benthics and limited field chemistry parameters. 9 sites were too dry to sample due to drought conditions. |
| September 1999: | Completed processing and identification of the 45 Spring 1999 samples (37 sites plus 8 replicate samples) . Entered the data into a LOTUS spreadsheet and calculated metrics and index scores. |
| October 1999: | Initiated Fall 1999 sampling during the week of October 25, 1999 and will complete this sampling during the beginning of November. |
| November 1999: | Completed Fall 1999 sampling. Released raw data from Spring 1999 sampling period to the public. Continued with processing and identification of Summer 1999 samples. |
| December 1999: | Completed processing and identification of Summer 1999 samples. Initiated processing of Fall 1999 samples. |
| January 2000: | Completed draft report for Spring 1999 sampling period (for internal |

review only). Initiated development of metrics for Summer 1999 samples. Continued processing and identification of Fall 1999 samples. Initiated Winter 2000 sampling.

GIS

March 1999-
Present

EPA biologists and a Signal Corporation GIS Analyst worked together to create an attributed point coverage of 127 potential stream sampling stations from GPS data and field maps. The GIS Analyst used the station locations to determine the watershed acreage above each station using USGS 7.5 minute Digital Elevation Models (DEM) and ArcView Spatial Analyst's hydrologic modeling extension. Other station attributes include stream name, basin, EIS class, stream order, elevation, sampling suite, mining activity, number of fills upstream of the station, mining permit numbers and dates, site accessibility, latitude, longitude, USGS quadrangle, county, state, and ecoregion.

July 1999

A Signal Corporation GIS Analyst completed a series of maps of sampling stations and land cover at various scales. There are maps including the entire region of mountaintop mining in West Virginia, maps focusing on each of the five primary watersheds, and those focusing on individual sampling arrays. Copies of the maps can be requested by contacting the Region III GIS Team.

Quality Assurance Project Plan

June 1999:

Prepared draft Quality Assurance Project Plan (QAPP) and sent it out to Streams Team members for review.

July 1999:

Held Streams Team meeting in Wheeling, WV to present the draft QAPP and preliminary data.

August 1999:

Revised QAPP and sent it out for final in-house review and received recommendation for approval. Final QAPP will be mailed to all interested parties in October 1999.

B. Water Chemistry

August, 1999

First Draft of Quality Assurance Project Plan sent for review

September, 1999

Laboratory services obtained for sample analyses. Protocol for sampling, shipping samples & data reporting was developed. Training Day" held for WVDEP inspectors in field procedures for sampling and flow measurement involving USGS, Corps of Engineers, EPA and chemistry lab staff.

Sampling equipment provided to WVDEP including field meters, flow measurement devices, sample containers and paperwork for documenting data and shipping samples to lab. Test Run held on sampling protocol for inspectors. Stream sampling began.

Sept/Oct, 1999	Samples sent to lab for analysis
November 1999	Samples taken and sent to lab for analysis.
December 1999	Samples taken and sent to lab for analysis.
January 2000	Samples taken and sent to lab for analysis.

III. Timetable for Completing the Technical Study

A. Benthic Monitoring

Complete the Fall 1999 sample laboratory work	February 2000
Complete the Winter 2000 sampling	February 2000
Complete the Winter 2000 sample laboratory work	March 2000
Interim draft report for 1999 sampling periods (for EIS)	April 2000
Draft of Technical Study (all 4 seasons)	June 2000
Final of Technical Study (all 4 seasons)	August 2000

B. Water Chemistry

Monthly through July 2,000 - samples of stream stations collected, sent to lab, reported to EPA, entered into database.

January/February 2000 - Finalize Project Plan.